

Name : **Narra Dhanalakshmi**

Designation: Associate Professor

Department: Electronics & Communication Engineering

Mail ID: dhanalakshmi\_n@vnrvjiet.in

Experience (in years): Teaching:19 Research: Others (If any, Specify):2 years



### 1.Educational / Technical qualifications:

S.No	Level (UG / PG / Ph.D)	Year of passing	Specialization
1	Ph.D	Thesis Submitted	Video Processing
2	M.Tech	2006	DS&CE
3	B.Tech	2001	ECE

### 2.Teaching and Learning:

#### 2.1.Teaching Interests:

- Switching Theory and logic Design
- Microprocessors & interfacing
- Microcontrollers & Applications
- Digital Design through VERILOG HDL
- Linear Integrated Circuits
- Computer Organization
- Digital signal processing
- Digital Image Processing
- DSP processors & Architectures
- EDA Tools
- Digital Integrated Circuits
- CPLD & FPGA architectures and applications

#### 2.2.Novel Teaching & Learning Techniques adopted:

Videos, POGIL,PPTs, Group Discussions, WIT and WIL, Technical Quiz

#### 2.3.Involvement in curriculum updating / Design:

Updating the syllabus of subjects like Switching Theory & Logic Design, Microprocessors and Microcontrollers, Embedded Systems,CPLD& FPGA architectures and applications, DSPA, DDTV, MPMC Lab etc.

### 3. Co-curricular and Extra-Curricular Activities

3.1. Interests and Hobbies:Gardening, listening to music

3.2. CCA/ECA Organized: Conducted technical quiz for B. Tech students

3.3. CCA/ECA participated: Posters presentation in open house 2015,2016 and 2017

3.4. Counseling and Mentoring Activity: Mentoring I,II,III& IV B.Tech students

3.5. Committees involved in:

Department level:

- Member-BoS
- Member- Department Academic Committee
- Member of PRC for B.Tech projects
- Member of PRC for M.Tech projects and seminars
- Coordinator for certificate courses in the department

Institute Level: Member- Grievance Redressal Committee

### 4. Conference / Workshop / Seminar / Guest Lectures:

#### 4.1.Conducted:

- Organized regional workshop on “Embedded Architecture & Applications” during 12<sup>th</sup>-14<sup>th</sup> February, 2009 at VNRVJIET, Hyderabad.
- Organized AICTE sponsored FDP on “Real time signal and image processing” during 6<sup>th</sup>- 18<sup>th</sup> June 2011 at VNRVJIET, Hyderabad.
- Organized TEQIP sponsored FDP on “Linux Kernel programming and Device Drivers” during 21<sup>st</sup>-30<sup>th</sup> March, 2013 in VNRVJIET, Hyderabad.
- Conducted training program on “Embedded Linux Application Development program” during 4<sup>th</sup> Feb 2013 to 20<sup>th</sup> June 2013 for B. Tech ECE and M,tech Embedded Systems students

- Organized AICTE sponsored FDP on “Real Time Embedded System Development” during 18<sup>th</sup>- 30<sup>th</sup> Nov, 2013 in VNRVJIET, Hyderabad.
- Organized TEQIP-II sponsored FDP on “Labview- Design & Development” during 2<sup>nd</sup>-14<sup>th</sup> June 2014 at VNRVJIET, Hyderabad.
- Conducted training program on “Design and Development in LabVIEW” during 2<sup>nd</sup> – 7<sup>th</sup> June 2014 & 14<sup>th</sup> -19<sup>th</sup> July 2014 at VNRVJIET
- Conducted AICTE Sponsored Faculty Development program on “Recent trends in Wireless Communications and Evolution of Simulation Tools”, during 11<sup>th</sup> – 23<sup>rd</sup> May 2015.
- Conducted Training program for B. Tech students on “Networking” during 25<sup>th</sup> May to 21<sup>st</sup> June 2015, at VNRVJIET, Hyderabad
- Conducted certification course (15 days) for B. Tech students on “VLSI front end design tools” in the month of November 2015, at VNRVJIET, Hyderabad
- Conducted workshop for faculty and students on “Embedded Hardware, Operating Systems and IoT Applications” during 20<sup>th</sup> to 23<sup>rd</sup> January 2016, at VNRVJIET, Hyderabad
- Conducted Seminars for B.Tech and M.Tech students
  - Global Climate Change- Impact on Environment on 1<sup>st</sup> October 2014
  - Environmental Monitoring in Industrial Applications on 22<sup>nd</sup> October 2014
  - Networking: an overview of ideas and issues on 15<sup>th</sup> Dec 2014
  - Embedded System connectivity with LabVIEW on 9<sup>th</sup> January 2015
  - A developer’s Perspective of Becoming an Embedded System expert on 6<sup>th</sup> June 2015
- Coordinator for 7th IEEE International Advance Computing Conference (IACC-2017) Organized by IEEE Computer Society Chapter of India Council & VNR Vignana Jyothi Institute of Engineering and Technology, during 5<sup>th</sup>-7<sup>th</sup> January 2017 at VNRVJIET, Hyderabad.
- Organized Certificate Courses for ECE students in the fields of Embedded systems, IoT applications, Cyber Security, Networking etc. during Academic year 2016-17 and 2017-
- Organized International workshop on "E-UVM open source Emulation and Functional Verification” during 13<sup>th</sup>-24<sup>th</sup>, July 2020 sponsored by E& ICT Academy IIT Guwahati and NIT-Patna at VNRVJIET, Hyderabad

#### 4.2. Attended:

- Attended regional workshop on “Embedded Systems” during 13<sup>th</sup>-17<sup>th</sup> March, 2006
- Attended workshop on “Educational Innovations” during 21<sup>st</sup> -22<sup>nd</sup> November, 2006 in VNRVJIET, Hyderabad.
- Attended three day workshop on “Design of Embedded System Applications DESA-2007, during 26<sup>th</sup> -28<sup>th</sup> Feb ,2007
- Attended a two day workshop on “Applications of Mathematical Techniques in Science and Engineering (AMTSE)” during 27<sup>th</sup>&28<sup>th</sup> April, 2007 in VNRVJIET, Hyderabad
- Attended a two day workshop on “Genetic Algorithm and its Applications” during 29<sup>th</sup>&30<sup>th</sup> June, 2007 in VNRVJIET, Hyderabad.
- Attended three day Short term intensive course on “Embedded architecture and applications, during 12<sup>th</sup> -14<sup>th</sup> Feb, 2009.
- Attended 2 Day Faculty Development Programme On “MSP430-An Embedded Processors(FG4618/F2013)” 29<sup>th</sup> – 30<sup>th</sup> Nov 2010, VNRVJIET, Hyderabad
- Attended AICTE sponsored Faculty development programme on “Real time signal and image processing” during 6<sup>th</sup>- 18<sup>th</sup> June 2011 at VNRVJIET, Hyderabad.
- Attended a 5-day Staff Development Program on “DSP Processor Architectures and Programming” organized by the Department of ECE in association with ISTE Chapter & IIPC of VNR Vignana Jyothi Institute of Engineering and Technology during 19-12-2011 to 23-12- 2011.

- Attended 2-Day Workshop on “Applications of digital Image Processing” held at CBIT, Hyderabad, from 17<sup>th</sup> & 18<sup>th</sup> February, 2012.
- Attended FDP on “MATLAB & SIMULINK” Organized by Dept. ECE, ISTE and IIPC of VNRVJIET in collaboration with Akademy of Design & Architecture and Math Works Bangalore during 14<sup>th</sup> to 16<sup>th</sup> March 2013
- Attended TEQIP-II sponsored FDP on “Linux Kernel programming and Device Drivers” during 21<sup>st</sup>-30<sup>th</sup> March, 2013 in VNRVJIET, Hyderabad.
- Attended 3 Day FDP on “Application Development using Embedded Controller Board “, during 8<sup>th</sup> -10<sup>th</sup> April 2013.
- Attended 3 Day workshop on “Art of Teaching” during 13-15 May, 2013 at VNRVJIET.
- Attended FDP on “Real Time Embedded System Development” during 18<sup>th</sup>-30<sup>th</sup> Nov, 2013 in VNRVJIET, Hyderabad.
- Attended ITRA- New delhi sponsored workshop on “Wireless Sensor Node Design” during 19<sup>th</sup> – 20<sup>th</sup> Dec 2014
- Attended TEQIP-II sponsored FDP on “Labview- Design & Development” during 2<sup>nd</sup> - 14<sup>th</sup> June 2014 at VNRVJIET, Hyderabad.
- Attended AICTE Sponsored Faculty Development program on “Recent trends in Wireless Communications and Evolution of Simulation Tools”, during 11<sup>th</sup> – 23<sup>rd</sup> May 2015.
- Attended a Faculty Development program on “Digital Image and Video Processing with hands-on ” during 4<sup>th</sup> to 8<sup>th</sup> January 2016, conducted by Department of CSE at MVSR Engineering College.
- Attended workshop for faculty and students on “Embedded Hardware, Operating Systems and IoT Applications” during 20<sup>th</sup> to 23<sup>rd</sup> January 2016, at VNRVJIET, Hyderabad.
- Attended AICTE sponsored Two-week Faculty Development program on “Research Trends in Digital Image & Video Processing” during 4<sup>th</sup> to 16<sup>th</sup> December 2017, conducted by Department of ECE at MGIT.
- Attended AICTE sponsored one week online FDP on " Outcome based education: a step towards excellence" during May 11-15,2020.
- Attended FDP on "Deep learning and its applications" during 9-13 Dec.2019. ELECTRONICS & ICT ACADEMY, NATIONAL INSTITUTE OF TECHNOLOGY Patna & Department of ECE, EIE , IEEE, ISTE chapters of VNR Vignana Jyothi Institute of Engineering & Technology, Hyderabad (Sponsored by MeitY HRD division, Ministry of ICT, Govt. of India)
- Attended FDP on "VLSI Chip Design Hands on using open source EDA" during 8-12 July 2019, ELECTRONICS & ICT ACADEMY, NATIONAL INSTITUTE OF TECHNOLOGY Patna& Department of Electronics and Communication Engineering , IEEE, ISTE and IETE chapters of VNR Vignana Jyothi Institute of Engineering & Technology, Hyderabad (Sponsored by MeitY HRD division, Ministry of ICT, Govt. of India)
- Attended FDP on "Sensor Networks and IoT" during 26-31 Aug. 2019, ELECTRONICS & ICT ACADEMY, NATIONAL INSTITUTE OF TECHNOLOGY Warangal & Department of Electronics and Communication Engineering, IEEE, ISTE and IETE Chapters of VNR Vignana Jyothi Institute of Engineering & Technology, Hyderabad (Sponsored by MeitY HRD division, Ministry of ICT, Govt. of India)
- Attended FDP on "Python Programming with Industry perspective" during 2 - 6th December 2019, ELECTRONICS & ICT ACADEMY, NATIONAL INSTITUTE OF TECHNOLOGY Patna & Department of Electronics and Communication Engineering ,

IEEE and ISTE chapters of VNR Vignana Jyothi Institute of Engineering & Technology, Hyderabad (Sponsored by MeitY HRD division, Ministry of ICT, Govt. of India)

- Attended One week FDP on "Python for machine learning", during May 18-23, 2020, VNRVJIET
- Attended Workshop on "One day workshop on Arduino", on 8 Feb 2020, organized by IIT Bombay.
- Attended Online ATAL FDP on "Internet of Things", during 31/5/2020 to 4/6/2020, by JNU , New Delhi
- Attended one week online Faculty Development Program on "OUTCOME BASED EDUCATION: A STEP TOWARDS EXCELLENCE" during 11-15 May 2020 under Margdarshan Scheme offered by Government College of Engineering, Karad.
- Attended PDP on "AI and ML for Engineering Applications" during 8-12 June, 2020
- Attended FDP on "Machine Learning With Python" during 15 June to 20 June 2020 conducted by BVRIT, Hyderabad
- Attended ONLINE NATIONAL WORKSHOP ON "DATA SCIENCE: TECHNIQUES AND TOOLS" during 20 JUNE TO 21 JUNE 2020 conducted by MITS Gwalior, under TEQIP-III
- Attended Two Weeks Online Refresher Course on "Engineering, Physical Sciences and Management" during 22nd June – 03rd July, 2020 conducted by Bharati Vidyapeeth's Institute of Computer Applications and Management (BVICAM)
- Attended Online FDP Program on Industrial IoT & Intelligent Connectivity using RPI during 25th to 27th June 2020 conducted by Malla Reddy Engineering College for Women, Hyderabad.
- Webinars Attended:

Name of the Webinar attended	Organized	Date on which event was held
Online Meditation session	Art of Living	8 <sup>th</sup> May,2020
How the Agri and IoT get connected	Mohamad sathak college of engineering	19th May 2020
Roles of IoT in Industrial applications	Pantech Solutions	21st May, 2020
Hands-on session on LaTeX - A Scientific Documenting Tool	VNR IEEE SB	21st May, 2020
Gesture Recognition based Air Writing using OpenCV	Sir Theagaraya College	23rd May 2020
Raspberry Pi With Opencv	Vardhaman College of Engineering	25th may 2020
Globar Webinar-Ai Solutions For Covid	Bennett University	25-05-2020

Machine Vision	Pune Vidyarthi Griha'scollege of Engineering and Technology	26-May-20
Python Programming	Dhanalakshmi Srinivasan Institute of Technologysamayapuram	26-May-20
Accelerating Computations Using Matlab & Simulink	Iucee Virtual Academy	26-05-2020
Remote Learning & Working The New Normal	Ites Ssc: Matpo-Nasscom It	27-05-2020
Deep Learning using Tensor Flow And Keras	Institute of Aeronautical Engineering	27-May-20
Rapidly Onboard Data Sources for your Machine Learning Model Infowrkd & Databricks	Infoworks	28-05-2020
Tackling Anxiety In The Context Of Impulsive Adaptation To Virtual Classroom	Centre For Presencing And Design Thinking” Team Of VNR VJIET	28 <sup>th</sup> May, 2020
Future Trends in CMOS Technology at 5nm and beyond	Chebrolu Engineering College	28th May, 2020
Artificial Intelligence For Employee Attribution	Adhiyaman College of Engineering In Association With Pantech E-Learning	29 <sup>th</sup> May, 2020
IUCEE Virtual Academy: "Experiential Learning Using Ultra Concurrent Remote Laboratory"	IUCEE Virtual Academy	29th May, 2020
BIRAC's Role In Creating The Startup Innovation	BIRAC	29-May-20
VLSI Design & Opportunities	VNRVJIET	30-May-20
Leadership Talk	MHRD's Innovation Cell	30th May 2020
COVID19: Impact on Education, Technology, Environment & Mankind	Virtual Summit: Andhra Layola Institute of Engineering & Technology	30th May 2020
Reinforcement Learning	St. Josephs Engineering College, Tamilnadu	13th June, 2020

Leadership Talk	MHRD's Innovation Cell	13th June, 2020
Art and Challenges of Writing Papers For Ieee Transactions	IEEE Bangalore	08-Jun-20
Deep Learning for Automatic Speech Recognition	AISSMS Institute of Information Technology	26th June 2020

- Attended 5th International Conference on Signal Processing, Communications and System Design (ICSPCOMSD-19) during 6th -7th December 2019
- Attended ONLINE NATIONAL WORKSHOP on Data Science: Techniques And Tools offered by MITS Gwalior, TEQIP-3 during 20 JUNE TO 21 JUNE 2020
- Attended Fifth International Conference on “Soft Computing and Signal Processing” (ICSCSP-2022) during June 24-25, 2022

## 5. Academic Contribution and Research & Consultancy:

### 5.1. Invited Lectures:

- Guest Lecture on “FSM design for complex digital systems” on 12 June., 2020, in the webinar series titled “RTL design and verification” conducted by VNRVJIET, Hyderabad
- Guest Lecture on “Digital Systems: From Logic Gates to Processors” on 13 Feb., 2020, at VNRVJIET, Hyderabad.
- Guest Lecture on “Programming advanced processor architectures” in Open House - 2K18 during 12-13 March, 2018, at VNRVJIET, Hyderabad.
- Guest Lecture on “Programming Embedded Processors for IoT applications” in Convergence- 2K18 during 5<sup>th</sup> -7<sup>th</sup> Feb. 2018 at VNRVJIET, Hyderabad
- Guest Lecture on “Introduction to Internet of Things(IoT)” during 05 to 07 Feb 2018, at VNRVJIET, Hyderabad.
- Guest Lecture on “Architectures for Internet of Things(IoT)” during 11.12.2017 to 16.12.2017, at VNRVJIET, Hyderabad.
- Guest Lecture on “Programming with DSP processors in Assembly language” in AICTE sponsored FDP on Real Time Embedded System Development” during 18th-30th Nov, 2013, at VNRVJIET, Hyderabad.
- Guest Lecture on “ARM Architecture and Programming” organized by Malla Reddy Engineering College for Women, during 2nd -3rd March 2012, Hyderabad.
- Guest Lecture on” Implementation of image processing algorithms” in AICTE sponsored FDP on Real time signal and image processing during 6th- 18th June 2011 at VNRVJIET, Hyderabad.
- Guest Lecture on “Digital concepts and their applications”, in the year 2010, HCU, Hyderabad.

5.2. Articles/Chapterspublished inBooks: 2

5.3. Bookspublishedassingleauthororaseditor: NIL

5.4. Projects Guided:

a) UG: 33

b) PG: 19

5.5. Research Interests: Image & Video processing and Embedded Systems

5.6. Ph.D students: NIL

a) Enrolled: NIL

b) Submitted: NIL

c) Awarded: NIL

5.7. Papers published in reviewed Journals:

S.No	Title of the Paper	Journal Name Vol.No. PP	ISBN/ISSN No.	Impact Factor/Citation Index	National/International
1	A Novel Video classification Technique using Multiple Features	International Journal of Image Processing and Applications, 2(1), 2011, pp.47-50	ISSN: 0975-8178	1.084	International
2	Design of a Low-Voltage, Low-Power, High-Gain Operational Amplifier for Data Conversion Applications	International Journal of Engineering Research and Applications (IJERA), vol.2, Issue 3, May-Jun 2012, pp.1030-1036	ISSN:2248-9622 Vol 2	1.76	International
3	FPGA Implementation of Interrupt Controller (8259) by using Verilog HDL	International Journal of Computer Applications 48(6):12-19, June 2012. Published by Foundation of Computer Science, New York, USA.	0975-888 Vol 48	0.821	International
4	Recovery Boosting Technique for improving Nbit recovery in 60 SRAM cells	International Journal of Engineering Research and applications (IJERA), , Vol 3 Issue 6, pp 01-05	ISSN: 2248-9622 Vol3	1.69	International
5	Motion Features for Content-Based Video Classification in Dynamic Backgrounds	Journal of Research in Signal Processing, Computing & Communication System Design	ISSN Number: 2395-3187, Vol-1, issue-2, 2015		International
6	Motion Detection Using Histogram Optical Flow For Human Access Control Points	International Journal Of Creative Research Thoughts (IJCRT)	ISSN:2320-2882, Volume. 6, Issue 1, Page No pp.1750-1755, February 2018.	7.97	International
7	Video Representation Based on Optical Flow for Dynamic Content Analysis	Journal of Theoretical and Applied Information Technology	ISSN: 1992-8645 E-ISSN: 1817-3195	0.595	International

			31st October 2021. Vol.99. No 20		
--	--	--	--	--	--

5.8. Papers presented at National / International conferences:

S.No	Title of the Paper	Names of the Conference/ Seminars	National/ International	Period
1	HMM based video classification using multiple features	National Conferences2009-SPCOM-09	National	4 <sup>th</sup> – 5 <sup>th</sup> Dec 2009
2	Content based sports video classification system	National conference on signal processing and communications SPCOM-10	National	23 <sup>rd</sup> - 24 <sup>th</sup> Dec 2010
3	Reconfigurable Wideband Patch Antenna	National conference on signal processing and communications SPCOM-10	National	23 <sup>rd</sup> - 24 <sup>th</sup> Dec 2010
4	A Novel Video classification Technique using Multiple Features	International Conference on Communication and Signal processing ICCOS 2011 Karunya University, Coimbatore-641 114	International	17-18, March 2011
5	Design of an Operational Amplifier for Data Conversion Applications	National Conference on VLSI, Signal Processing and Embedded Systems- NC-VelaSiem-2k12	National	29 <sup>th</sup> – 30 <sup>th</sup> August 2012
6	Antirrigging Voting System using Finger print	National Conference on VLSI, Signal Processing and Embedded Systems- NC-VelaSiem-2k12	National	29 <sup>th</sup> – 30 <sup>th</sup> August 2012
7	Silhouette Extraction Of A Human Body Based On Fusion Of Hog And Graph-Cut Segmentation In Dynamic Backgrounds	International Conference on Recent Trends in Communication and Computer Networks ComNet 2013	International	08 <sup>th</sup> - 09 <sup>th</sup> , Nov. 2013
8	Implementation Of HMM Based Automatic Video Classification Algorithm On The Embedded Platform	2015 IEEE International Advanced Computing Conference (IEEE IACC-2015)	International	12 <sup>th</sup> -13 <sup>th</sup> June 2015
9	Motion Features for Content-Based Video Classification in Dynamic Backgrounds	Signal Processing, Communications And System Design (ICSPCOMSD-2015)	International	3 <sup>rd</sup> -4 <sup>th</sup> July 2015

10	Weighting Multiple Features and Double Fusion Method for HMM Based Video Classification	International Conference on Micro-Electronics, Electromagnetics and Telecommunications ICMEET-2015, GITAM University, Visakhapatnam © Springer India 2016 Microelectronics, Electromagnetics and Telecommunications, Lecture Notes in Electrical Engineering 372 Scopus (DOI: 10.1007/978-81-322-2728-1_68) and Google Scholar	International	18 <sup>th</sup> -19 <sup>th</sup> , December 2015
11	Skeletonization of Players in Dynamic Backgrounds Using Discrete Curve Evolution	International Conference on Micro-Electronics, Electromagnetics and Telecommunications ICMEET-2015,GITAM University, Visakhapatnam December 18th & 19th, 2015 © Springer India 2016 Microelectronics, Electromagnetics and Telecommunications, Lecture Notes in Electrical Engineering 372  Scopus (DOI: 10.1007/978-81-322-2728-1_66) and Google Scholar	International	18 <sup>th</sup> -19 <sup>th</sup> , December 2015
12	Implementation of Content Based Video Classification Using Hidden Markov Model	2017 IEEE 7th International Advance Computing Conference (IACC),5-7 Jan. 2017, Electronic ISSN: 2473-3571, Electronic ISBN:978-1-5090-1560-3, Print on Demand(PoD) ISBN: 978-1-5090-1561-0, Scopus Publisher: IEEE DOI: 10.1109/IACC.2017.0134	International	05 <sup>th</sup> -07 <sup>th</sup> Jan, 2017
13	Aadhaar Based Biometric Attendance System Using	2017 IEEE 7th International Advance Computing Conference, 978-1-5090-1560-	International	05 <sup>th</sup> -07 <sup>th</sup> Jan, 2017

	Wireless Fingerprint Terminals	3/17 DOI 10.1109/IACC.2017.128, pp.651-655.		
14	Optical Flow Based Video Content Representation Using Histograms	5 <sup>th</sup> International Conference on Signal Processing, Communications and System Design (ICSPCOMSD-19)	International	6 <sup>th</sup> -7 <sup>th</sup> Dec 2019
15	Content based temporal segmentation for video analysis	2020 IEEE-HYDCON computational Intelligence	International	11 <sup>th</sup> -12 <sup>th</sup> Sep 2020
16	Design And Analysis of Mono Pulse Comparator for Tracking Applications	Attended Fifth International Conference on “Soft Computing and Signal Processing” (ICSCSP-2022).	International	June 24-25, 2022

#### 5.9. Sponsored research Projects:

S.No	Title	Agency	Period	Grant amount	Ongoing / Completed
1.	Design and Development of Knowledge based expert system to assist farmers for maintenance of Agricultural field using aerial data acquisition	TSCOST-DST	One year (March 2022-Mar 2023)	Rs. 4,00,000/-	Ongoing

#### 5.10 Consultancy Projects:

S.No	Title	Agency	Period	Sanctioned Amount	Ongoing / Completed

#### 6. Awards / Honors received:

- 100% result in “Embedded Networking” during the academic year 2014-15.
- 100% result in “Microprocessors and Microcontrollers” during the academic year 14-15.
- Qualified Faculty Eligibility Test (FET)-2013 examination.
- Among top 20 in the FDP on “Internet of Things(IoT)” conducted under AICTE Training And Learning (ATAL) Academy by JNU, New Delhi.

#### 7. Motto: Work is Worship